* NOTICES *

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2.**** shows the word which can not be translated.
3.In the drawings, any words are not translated.

DETAILED DESCRIPTION

[Detailed Description of the Invention]
[0001]
[Industrial Application]This invention protects a chip type electronic component from contamination on the occasion of storage of a chip type electronic component, transportation, and wearing, Since it mounts in an electronic circuit board, it is made to align, and it is related with the cover tape by which a heat seal may be carried out to the carrier tape made from a plastic which formed the receiving pocket among the packed bodies which have a function which can be taken out.
[0002]
[Description of the Prior Art]Chip type electronic components for surface mounts, such as transistors including IC, a diode, a capacitor, and a piezoelectric element register, in recent years, According to the shape of electronic parts, it is packed by the packed body which consists of a cover tape which can carry out the heat seal of the pocket which can be stored, and by which embossing shaping was carried out to the carrier tape made from a plastic formed continuously, and a carrier tape, and it is supplied. After the electronic parts of contents exfoliate the cover tape of a packed body, they are taken out automatically and the surface mount is carried out to the electronic circuit board. Although the intensity at the time of a cover tape exfoliating from a carrier tape was called peel-off intensity, when this intensity was too low, at the time of a packed body transfer, the cover tape separated and there was a problem that the electronic parts which are contents were omitted. On the contrary, when too strong, the phenomenon which jumps out of a receiving pocket just before a carrier tape vibrates and being equipped with electronic parts, when exfoliating a cover tape, i.e., a jumping trouble, was caused. While the chip making of more highly efficient and miniaturized electronic parts progresses with the large improvement in a surface mount technology in recent years, Electronic parts by vibration at the time of a packed body transfer A carrier tape embossing

internal surface, Or the static electricity which contacts the inner surface of a cover tape and is generated by friction in that case, And the static electricity obstacle that electronic parts caused destruction and degradation by the spark of the static electricity which generates a cover tape when exfoliating from a carrier tape was also generated, and the electrostatic measures against packed bodies, such as a carrier tape and a cover tape, were taken the problem of the utmost importance. Conventionally, about electrostatic processing of a carrier tape, carbon black to the construction material used scours, or it is performed by coating, and that with which it is satisfied of the effect was obtained. However, still sufficient measures are not taken about electrostatic processing of a cover tape, but, under the present circumstances, coating of the spray for preventing static electricity to the outer layer of a cover tape or the conductive material, etc. are only performed. However, the treatment effect was not enough as protection of the electronic parts enclosed because of processing of the cover tape outside, and the effect did not exist to the static electricity especially generated by contact of a cover tape inner surface and electronic parts. Although it is possible to carry out by coating of a spray for preventing static electricity or the scour lump to a glue line about the electrostatic processing to a cover tape inner surface, i.e., a glue line, In this case, the spray for preventing static electricity scoured to a glue line starts the bleeding to a cover tape inner surface, The dependency over the temperature and humidity of the environment where sealing nature becomes unstable, and the troubles of a sealing failure occur frequently, an electrostatic effect also falls temporally, or a packed body is used, especially humidity was strong, and profitable **** did not have sufficient effects -- an electrostatic effect falls remarkably -- under low humidity called 10%RH. About coating, it is stabilized in a carrier tape, selection of the binder which can be pasted up is difficult, and since an original glue line is covered, peel-off intensity falls remarkably. Since an electrostatic effect also fell much more more nearly temporally than the time of a scour lump, it was not performed.

[0003]

[Problem(s) to be Solved by the Invention]The measures against static electricity of a glue line are taken, and the seal contingency of peel-off intensity and aging are small, and this invention provides the sealing nature stable cover tape for a chip type electronic component package.

[0004]

[Means for Solving the Problem]A result which this invention could solve the above problems and was studied wholeheartedly, A polyethylene film is used as an outer layer as an interlayer between a biaxially oriented polyester film, an outer layer, and a glue line, A thing which made ethylene vinyl acetate system resin distribute the amount polyethylene of polymers uniformly as a glue line is coated, Knowledge that a complex film which coated the surface with a cationic surface active agent which uses chloridation trimethyl alkylammonium as the main ingredients is transparent and it can become a cover tape with the good characteristic is

acquired, and it comes to complete this invention. Namely, this invention is a pocket which stores a chip type electronic component a cover tape which can carry out a heat seal to a carrier tape made from a plastic formed continuously, and this cover tape, An outer layer is a biaxially oriented polyester film, and an interlayer between an outer layer and a glue line is a polyethylene film, and a glue line, It is a cover tape for a chip type electronic component package making ethylene vinyl acetate system resin distribute the amount polyethylene of polymers uniformly, making the surface coat with a cationic surface active agent which uses chloridation trimethyl alkylammonium as the main ingredients, and changing. An addition of a cationic surface active agent in which a desirable mode of this invention uses chloridation trimethyl alkylammonium as the main ingredients is 0.001 to 10 weight section to ethylene vinyl acetate system resin 100 weight section of a glue line, It is a cover tape for a chip type electronic component package, wherein adhesive strength of a glue line of this cover tape and a sealing surface of this carrier tape is 10 per seal width of 1 mm - 120gr and visible light transmissivity of this cover tape is not less than 75%.

[0005]

[Function]When drawing 1 explains the component of the cover tape 1 of this invention, the outer layer 2 is a biaxially oriented polyester film, and it is a rigid high film in the transparence whose thickness is 6-100micro. In 6micro or less, rigidity is lost, and if 100 micro is exceeded, a seal will become it is too hard and unstable. The interlayer 4 is a polyethylene film. The glue line 5 makes the ethylene vinyl acetate system resin which has transparency distribute uniformly with the molecular weights 1 million-6 million and a particle diameter [0.5-200micro] polyethylene, and what has the characteristic which can carry out a heat seal to the carrier tape 6 made from a plastic of a mating material is selected. And the glue line surface is uniformly coated with the cationic surface active agent which uses chloridation trimethyl alkylammonium as the main ingredients, In that case, below 10^{13}omega/** are required for the surface resistance value of a glue line at least, and it is still more preferably good. [of the range of 10^{6}omega/** - 10^{10}omega/**] If it becomes larger than 10^{13}omega/**, an electrostatic effect will get extremely bad and the target performance will not be obtained. The addition is 0.001 to 10 weight section to ethylene vinyl acetate system resin 100 weight section of a glue line by the above-mentioned surface resistance characteristic, and its 0.01-5 copies are still more preferably good. If less than 0.001 weight sections, an electrostatic effect will not be revealed, and if more than ten weight sections, peel-off intensity becomes remarkably weak and it is not suitable for practical use. Since the surface resistance value of the glue line is adjusted to below 10^{13}omega/**, Even if electronic parts contact this cover tape 1 on the way of [conveyance] which enclosed electronic parts with this carrier tape 6 with this cover tape 1, or when exfoliating this cover tape 1 and taking up electronic parts, it does not generate but

the static electricity can protect electronic parts from a static electricity obstacle. In order to raise an electrostatic effect further, an antistatic treatment layer or a conductive layer may be provided in an outer layer side, i.e., the surface and rear surface of a biaxially oriented polyester film. About the formation method of heat sealed type adhesives, extrusion laminating method is cheap, and it is desirable even if it sees from a sanitary aspect. 10-80micro are desirable still more preferred, and, as for the thickness of a glue line, 20-50micro are good. Thickness is difficult for film production on the characteristic of a lamination machine in 10micro or less, in not less than 80micro, the diameter of a volume at the time of a long volume becomes large, and storage of a film has difficulty. Both may be laminated via the heat-hardened type glue line of an isocyanate system, an imine system, etc. for the purpose of raising the laminate strength of an outer layer and an interlayer. Ethylene vinyl acetate system resin of a glue line is selected so that the adhesive strength of this cover tape 1 and this carrier tape 6 may become ten to 70 gr still more preferably ten to 120 gr per seal width of 1 mm in this case. When peel-off intensity is lower than 10gr, at the time of a packed body transfer, a cover tape separates and there is a problem that the electronic parts which are contents are omitted. On the contrary, if higher than 120gr, the phenomenon which a carrier tape vibrates when exfoliating a cover tape, and jumps out of a receiving pocket just before electronic-parts wearing is carried out, i.e., a jumping trouble, will be caused. According to this invention, the dependency of seal conditions is low, and the performance which aging of the peel-off intensity by storage environment and a surface resistance value makes few purposes can be obtained.

[0006]since an opening is made between a glue line and an outer layer at the time of rolling up at the same time it carries out cover tape volume appearance and prevents the blocking at the time, since the amount polyethylene of polymers is distributing to the glue line, The transfer to the outer layer of the cationic surface active agent which uses chloridation trimethyl alkylammonium as the main ingredients is prevented, and aging of a surface resistance value is suppressed. 10-20 are desirable still more preferred, and, as for the carbon number of the alkyl group of the cationic surface active agent which uses chloridation trimethyl alkylammonium as the main ingredients, 12-16 are good. Peel-off intensity will become weak, if concentration is adjusted so that a surface resistance value may become in below 10 ^{13}omega/** since it is difficult to acquire a surface resistance value by thin concentration if it is 10 or less and 20 or more. Since the surface resistance value in a very thin mode with effective concentration of this ** is acquired, the influence of this ** originally said to worsen heat-sealing nature can be suppressed as much as possible. 0.5-200micro are desirable still more preferred, and, as for the particle diameter of the amount polyethylene of polymers, 10-100micro are good. At 0.5micro or less, a blocking preventive effect and the depressor effect of aging of a surface resistance value are not acquired for particle diameter, but it becomes large with Bala of peel-off intensity in not less than 200micro. 0.01 to 50 weight section is

desirable still more preferred to ethylene vinyl acetate system resin, and 0.01 to 5 weight section of an addition is good. By 0.01 or less weight sections, a blocking preventive effect and the depressor effect of aging of a surface resistance value are not acquired for an addition, but the transparency of a film gets worse remarkably in 50 or more weight sections. As for a molecular weight, 1 million-6 million are preferred, and 3 million-5,500,000 are still more preferably good. A molecular weight fuses or less by 1 million at the time of an extrusion lamination, and a blocking preventive effect and the depressor effect of aging of a surface resistance value are no longer acquired, and it is hard to fuse polyethylene or more by 6 million in the case of purging of a lamination machine, and a fence about a man day to exchange of resin. Since it is constituted so that the visible light transmissivity of a cover tape may be not less than 80% preferably not less than 75%, the electronic parts of the inside enclosed with the carrier tape can check with viewing or machinery. When lower than 10%, the check of inner electronic parts is difficult.

[0007]

[Example]Although the example of this invention is shown below, this invention is not limited at all by these examples.

<<Examples 1,2,3, 4, and 5>>, the <<comparative examples 1,2,3, 4, and 5>>

To ethylene vinyl acetate system resin by an extrusion lamination at the biaxially oriented polyester film and polyethylene film [of 15 micro of thickness / of the laminated article of a polyethylene film] side of 25 micro of thickness The molecular weight 5 million, The glue line which consists of what distributed uniformly polyethylene 1 weight section with a particle diameter of 100 micro is produced to 15 micro of thickness, The cover tape of the lamination shown in drawing 1 which coated the biaxially oriented polyester film side and the glue line side with the cationic surface active agent (the Kao Corp. make, surface-active agent) which uses trimethyl dodecyl chloride ammonium as the main ingredients was obtained. The obtained cover tape was heat sealed with the carrier tape made from PS of 16-mm width after the slit to 13.4-mm width, and peel-off intensity was measured. Measurement of the surface resistance value by the side of a glue line was performed based on JIS-K-6911, and the characterization result was shown in Table 1.

* The glue line of a comparative example is resin instead of ethylene vinyl acetate system resin.

* An addition [as opposed to ethylene vinyl acetate system resin 100 weight section of a glue line in the number of a surface-active agent].

* Heat-sealing conditions : 140-180 **/20psi/1sec. seal width 0.4 mmx2* peel conditions : 180-degree peel Peel speed 300mm/min.n=3 [0008]

[Table 1]

	実施例1	実施例2	実施例3	実施例4	実施例5
界面活性剤	0.002	0.01	0.5	1	5
ピールオフ強度（g／1mm巾）					
初期値	40	40	40	40	40
40°C-90%、30DAYS	45	50	52	44	43
60°C、30DAYS	50	48	50	48	40
接着層表面抵抗（Ω／□）					
初期値	10^{10}	10^{8}	10^{8}	10^{7}	10^{7}
40°C-90%、30DAYS	10^{11}	10^{8}	10^{8}	10^{8}	10^{7}
60°C、30DAYS	10^{10}	10^{9}	10^{8}	10^{8}	10^{8}

[0009]

[Table 2]

	比較例1	比較例2	比較例3	比較例4	比較例5
接着層	EMMA	EEA	EMAA	アイオノマー	EAA
ポリエチレンの有無	有	無	無	無	有
界面活性剤	0.0005	0.01	0.5	1	15
ピールオフ強度（g／1mm巾）					
初期値	40	40	40	2	5
40°C-90%、30DAYS	60	56	56	0	0
60°C、30DAYS	85	60	55	0	0
接着層表面抵抗（Ω／□）					
初期値	10^{13}	10^{8}	10^{6}	107	10^{7}
40°C-90%、30DAYS	10^{13}以上	10^{13}以上	10^{13}以上	10^{13}以上	10^{13}以上
60°C、30DAYS	10^{13}以上	10^{13}以上	10^{13}以上	10^{13}以上	10^{13}以上

[0010]

[Effect of the Invention]When this invention is followed, electrostatic processing is carried out by the glue line and Contact with electronic parts and a cover tape. or the static electricity generated at the time of exfoliation of a cover tape, [stop and] By two of the point that the

electrostatic effect is stable also to an operating environment or aging, and does not affect sealing nature, either, and the point that peel-off intensity can be arbitrarily set up in the range of 10 per mm - 120gr. Contact with the electronic parts and the cover tape which are the conventional problems. Or the problem of the static electricity generated at the time of exfoliation of a cover tape, the problem that the dependency over the seal conditions of peel-off intensity is large, and the problem that changes with storage environment temporally can be solved, and the stable peel-off intensity can be obtained.

[Translation done.]